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Rev	Date	By	Description
1	7-17-19	-	CITY COMMENTS

**City of Buckeye**  
**Fire Station No. 705**  
30551 W. Tartesso Pkwy.  
Buckeye, AZ 85396

**1ST SUBMITTAL**

Drawn/Checked By \_\_\_\_\_ / GJJ

Date **07-17-19**

Project Number **318009**

Sheet Number **PLUMBING SPECIFICATIONS**

**P0.1**

WATER PIPE SIZING CALCULATIONS				
FIXTURE TAG	FIXTURE TYPE	FIXTURE UNITS	NO. OF FIXTURES	TOTAL FIXTURE UNITS
WC'S	WATER CLOSET	10	9	90
L'S	LAVATORY	2	9	18
SH'S	SHOWER	4	6	24
S'S	SINKS	3	9	27
CWB'S	CLOTHES WASHER	4	2	8
MS'S	SERVICE SINK	3	2	7
HB'S	HOSE BIBB	2.5	6	30
EDF'S	DRINK. FTN.	.25	2	4
TOTAL FIXTURE UNITS				= 208
INSTALL A 2" WATER METER (100 GPM = 245 FLUSH VALVE F.U.) INSTALL A 2-1/2" WATER LINE AND 2-1/2" RPBP.				
TOTAL LENGTH OF PIPING INSTALLED INCLUDING 25% FITTING LOSS				412 FT
VERIFY AVAILABLE PRESSURE AT MAIN (PROVIDE FLOW TEST)				75 PSI
TAP LOSS				1.78 PSI
WATER METER LOSS (2") "BADGER" DISC METER				6.0 PSI
RPBP LOSS (2-1/2")				13 PSI
STATIC LOSS (10' X 0.43 PSI/FT)				4.3 PSI
PRESSURE RESERVED FOR OPERATION OF FIXTURES				25 PSI
PRESSURE AVAILABLE FOR PIPING				18.92 PSI
18.92 PSI/412 LF X 100 = 4.5 PSI LOSS ALLOWABLE PER 100 FT. OF PIPING,4 PSI USED				
BRANCH PIPE SIZING CHART FOR 4.0 PSI LOSS/ 100 FT OF PIPING				
PIPE SIZE	FLUSH VALVE FIXTURE UNITS	FLUSH TANK FIXTURE UNITS	GPM	
1/2"	-	1	2	
3/4"	-	6	5	
1"	-	16	12	
1-1/4"	-	32	21	
1-1/2"	16	60	33	
2"	108	225	70	
2-1/2"	365	479	120	

WATER CONSERVATION NOTES	
ALL FIXTURES SHALL MEET THE FOLLOWING LOW-FLOW WATER CONSERVATION REQUIREMENTS:	
WATER CLOSETS:	1.6 GALLONS PER FLUSH
LAV FAUCETS:	.5 GALLONS PER MINUTE
SHOWERS:	2.5 GALLONS PER MINUTE
PROVIDE FLOW RESTRICTORS WHERE REQUIRED TO MEET THESE FLOW RATES.	

SYMBOL	DESCRIPTION	ABBR.
— — —	WASTE OR SEWER PIPING	W
— — —	VENT PIPING	V
— — —	COLD WATER PIPING	CW
— — —	HOT WATER PIPING	HW
— — —	HOT WATER RETURN PIPING	HWR
⊕	BALL VALVE	BV
⊕	CHECK VALVE	CKV
⊕ b	PRESSURE GAUGE & COCK (STEAM SIPHON)	PG
⊕	THERMOMETER	TH
— — —	STRAINER W/FULL SIZE BLOW DOWN VALVE.	ST
— — —	FLANGE	FLG
⊕	GAS COCK, GAS STOP VALVE	-
⊕	UNION	U
⊕	HOSE BIBB	HB
⊕	FLOOR SINK	FS
⊕	FLOOR DRAIN	FD
⊕	FLOOR CLEANOUT	FCO
⊕	SURFACE CLEANOUT	SCO
⊕	WALL CLEANOUT	WCO
⊕	ROOF DRAIN	RD
⊕	OVERFLOW DRAIN	OFD
⊕	VENT THRU ROOF	VTR
— IW —	INDIRECT WASTE	IW

FIXTURE TAG	FIXTURE TYPE	TRAP SIZE	WASTE SIZE	VENT SIZE	CW SIZE	HW SIZE
WC1-WC2	WATER CLOSET	INTEGRAL	4"	2"	1"	-
L1- L3	LAVATORY	1-1/2"	2"	1-1/2"	1/2"	1/2"
S1-S4	SINK	1-1/2"	2"	1-1/2"	1/2"	1/2"
S5-S6	DECON SINK	1-1/2"	2"	2"	3/4"	3/4"
S7-S8	SINK	1-1/2"	2"	2"	3/4"	3/4"
MS1, MS3	MOP SINK. SERVICE SINK	3"	3"	2"	3/4"	3/4"
MS2	MOP SINK. SERVICE SINK	4"	4"	2"	3/4"	3/4"
SH1-SH2	SHOWER	1-1/2"	2"	1-1/2"	3/4"	3/4"
EDF	DRINKING FOUNTAIN	2"	2"	1-1/2"	1/2"	-
CWB	CLOTHES WASHER	2"	2"	1-1/2"	3/4"	3/4"

**PLUMBING FIXTURE SPECIFICATIONS:**

**WC1** – WATER CLOSET (FLOOR MOUNTED FLUSH VALVE):  
CRANE MODEL 3-325-E, FLUSH VALVE FLOOR SET VITREOUS CHINA, 1.6 GALLONS PER FLUSH WATER–SAVER WATER CLOSET. SIPHON JET ACTION, ELONGATED BOWL, COLOR SHALL BE WHITE. 1-1/2" TOP SPUD, WITH FLAT BOLT CAP COVERS. FLUSH VALVE: SLOAN "ROYAL" 111 WITH 1-1/2" O.D. FLUSH CONNECTION. PROVIDE SPERZEL MODEL SM-1-EW WHITE OPEN FRONT SEAT, WITHOUT COVER, WITH CONCEALED CHECK HINGE.

**WC2** – WATER CLOSET (FLOOR MOUNTED FLUSH VALVE, ADA):  
CRANE MODEL 3H-701-E, FLUSH VALVE 18" HIGH FLOOR SET 1.6 GALLONS PER FLUSH WATER–SAVER WATER CLOSET. SIPHON JET ACTION, ELONGATED BOWL, COLOR SHALL BE WHITE. 1-1/2" TOP SPUD, WITH FLAT BOLT CAP COVERS. FLUSH VALVE: SLOAN "ROYAL" 111 WITH 1-1/2" O.D. FLUSH CONNECTION. PROVIDE SPERZEL SM-1-EW WHITE OPEN FRONT SEAT, WITHOUT COVER, WITH CONCEALED CHECK HINGE.

**L1** – LAVATORY: (COUNTERTOP OVAL, ADA):  
INTEGRAL WITH COUNTERTOP (REFER TO ARCHITECTURAL DETAILS FOR EXACT SINK LOCATION FOR ROUGH IN AND CONSTRUCTION MATERIAL). SUPPLY: SYMMONS "SYMMETRIX" MODEL S-244-2-FR--5, 4" CENTERSET LAVATORY FAUCET, WITH WRIST BLADE TYPE ADA HANDLES, 5 GPM AERATOR AND POP UP DRAIN ASSEMBLY. PROVIDE 1/2" x 3/8" 1/4 TURN BALL VALVE ANGLE STOPS, WITH FLEXIBLE TUBE RISERS. PROVIDE OFFSET P TRAP FOR HANDICAPPED ACCESS. INSULATE ALL EXPOSED WATER AND WASTE PIPING BELOW COUNTER WITH TRUEBRO, "HANDI-GUARD" INSULATION KIT, MODEL 102, WITH ACCESSORY #105.

**L2** – LAVATORY: (WALL HUNG, ADA):  
AMERICAN STANDARD "LUCERNE" MODEL 0356.015, 20-1/2" x 18-1/4", WALL-HUNG SINK/LAVATORY VITREOUS CHINA, FRONT OVERFLOW, BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE, FAUCET HOLES 8" CENTERS, WALL HANGER INCLUDED. SUPPLY: SYMMONS "SYMMETRIX" MODEL S-244-2-FR--5, 4" CENTERSET LAVATORY FAUCET, WITH WRIST BLADE TYPE ADA HANDLES, .5 GPM AERATOR AND POP UP DRAIN ASSEMBLY. PROVIDE 1/2" x 3/8" 1/4 TURN BALL VALVE ANGLE STOPS, WITH FLEXIBLE TUBE RISERS. PROVIDE OFFSET P TRAP FOR HANDICAPPED ACCESS. INSULATE ALL EXPOSED WATER AND WASTE PIPING BELOW COUNTER WITH TRUEBRO, "HANDI-GUARD" INSULATION KIT, MODEL 102, WITH ACCESSORY #105.

**TMV1** – THERMOSTATIC MIXING VALVE:  
WATTS MODEL MMV-UT-M1, THERMOSTATIC MIXING VALVE, CAPABLE OF DELIVERING 0.5 GPM MINIMUM TO 12 GPM MAX., 110°F OUTLET, ADJUSTABLE TEMPERATURE RANGE FROM 80°F TO 120°F. THE VALVE SHALL MEET ASSE STANDARDS 1017, 1069, 1070 LISTED AND IAPMO UPC LISTED. UNIT SHALL CONTROL THE TEMPERATURE OF THE HOT WATER TO THE FIXTURES. SET TO MAX OF 105°F, THE VALVE SHALL HAVE 1/2" FEMALE NPT UNION INLET AND OUTLET CONNECTIONS, SHALL BE SUPPLIED WITH SUITABLE ACCESS PANEL.

**SH1** – SHOWER PAN AND CONTROLS:  
SHOWER SHALL BE BUILT UP TYPE PER ARCHITECTURAL DRAWINGS AND DETAIL, PROVIDE ACORN MODEL SBS-48-3F FLOOR PAN, 48 x 48 TERRAZZO WITH 2" CAST BRASS CHROME PLATED SHOWER DRAIN. COMPLETE WITH "SYMMONS" 1-100VT-E-X PRESSURE BALANCING SHOWER UNIT, "STATESMAN" MODEL #SM150 1.5 GPM SHOWER HEAD, SOLID BRASS CONSTRUCTION, MOUNTED HEIGHT SHALL BE PER ARCHITECTURAL DRAWINGS.

**SH2** – SHOWER PAN AND CONTROLS (ADA):  
SHOWER SHALL BE BUILT UP TYPE PER ARCHITECTURAL DRAWINGS AND DETAIL, PROVIDE ACORN MODEL SBS-36-3F FLOOR PAN, 36 x 36 TERRAZZO WITH 2" CAST BRASS CHROME PLATED SHOWER DRAIN. COMPLETE WITH "SYMMONS" MODEL S-96-300-B30-L-V TEMPTROL PRESSURE-BALANCING MIXING VALVE WITH LEVER HANDLE AND ADJUSTABLE STOP SCREW TO LIMIT HANDLE TURN. WALL/HAND SHOWER WITH 60" FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER, WALL CONNECTION AND FLANGE, 30" SLIDE BAR FOR HAND SHOWER MOUNTING SHOWER HEAD, SOLID BRASS CONSTRUCTION, MOUNTED HEIGHT SHALL BE PER ARCHITECTURAL DRAWINGS. WITH 1.5 GPM FLOW RESTRICTOR.

**EDF** – ELECTRIC DRINKING FOUNTAIN (DUAL HEIGHT ADA):  
OASIS MODEL PBAMSL, BARRIER-FREE, WALL MOUNTED, STAINLESS STEEL TOP, WELDED STEEL FRAME, MOUNT @ ADA HEIGHT, IN-LINE FLOW REGULATOR FOR CONSTANT STREAM. FRONT AND SIDE PUSH BAR ACTVATED VALVES, 7.8 GPH @ 50 DEGREES FAHRENHEIT WITH 80 DEGREE INLET WATER TEMPERATURE, 90 DEGREE FAHRENHEIT AMBIENT, 1/4 HP, 115V, 5.0 FLA., 400 WATTS, 1/2" x 3/8" O.D. 1/4 TURN BALL VALVE SWEAT ANGLE STOP, TUBULAR P-TRAP, MOUNT 36" TO BUBBLER OF HANDICAP UNIT FROM FINISHED SURFACE. REFRIGERANT TO BE HFC-134A, UNIT TO HAVE ZERO LEAD IN COOLER COMPONENTS.

**S1** – SINK (ISLAND KITCHEN):  
INTEGRAL WITH COUNTERTOP (REFER TO ARCHITECTURAL DETAILS FOR EXACT SINK REQUIREMENTS CONSTRUCTION MATERIAL). SUPPLY FITTING: CHICAGO MODEL 1201-ACP SWING SPOUT. CHICAGO E35JKCP AERATOR 1.5 GPM, DISPOSER: ISE MODEL BADGER 555-SS, 3/4 HP, 120 VOLT, SINGLE PHASE. PROVIDE LK-35 BASKET STRAINER, 1/2" X 3/8" 1/4 TURN BALL VALVE ANGLE STOPS, WITH FLEXIBLE TUBE RISERS.

**S2** – SINK (MAIN KITCHEN SINK):  
INTEGRAL WITH COUNTERTOP (REFER TO ARCHITECTURAL DETAILS FOR EXACT SINK REQUIREMENTS AND CONSTRUCTION MATERIAL). SUPPLY FITTING: FISHER MODEL 34231, PRE-RINSE SPRING 8" C/C DECK MOUNTED WITH ISLAND BRACKET AND ADDED ON FAUCET, 8" SWING-SPOUT, 36 HOSE WITH STAINLESS STEEL EXTERNAL JACKET,ULTRA SPRAY VALVE AT 1.15 GPM @ 60 PSI, ADJUSTABLE WALL BRACKET, DISPOSER: ISE MODEL BADGER 555-SS, 3/4 HP, 120 VOLT, SINGLE PHASE. PROVIDE ELKAY MODEL J-35-STP BASKET TRAINER AT ONE COMPARTMENT AND DISPOSER AT OTHER COMPARTMENT. PROVIDE 1-1/2" TRAP ASSEMBLY AND 1/2" x 3/8" 1/4 TURN BALL VALVE ANGLE STOPS, WITH FLEXIBLE TUBE RISERS.

**S3** – SINK (EXAM ROOM):  
ELKAY MODEL DLK191910 19-1/2" x 19" x 10" DEEP, 18 GAUGE TYPE 304 STAINLESS STEEL SELF RIMMING SINK. SINGLE HOLE PUNCH SUPPLY FITTING SUPPLY FITTING: CHICAGO MODEL 50-TABOP DECK MOUNTED 5-1/4" RIGID/SWING GOOSENECK SPOUT WITH 2-3/8" LEVER HANDLES FOR TEMP CONTROL, 2.2 GPM VANDAL RESISTANT AERATOR PROVIDE ELKAY MODEL LK-35 BASKET STRAINER TAILPIECE SYSTEM TRAP. WATTS 519-173 17 GAUGE 1-1/2" x 1-1/2" SEMI-CAST BRASS P-TRAP WITH CLEANOUT. SUPPLIES: WATTS BV894020K 5/8" x 3/8" OD CHROME PLATED LOOSE KEY QUARTER TURN BALL VALVE STYLE ANGLE STOPS WITH 20" FLEXIBLE RISER TUBES AND ESCUTCHEONS.

**S4** – LAUNDRY SINK:  
ELKAY MODEL BLR1560, 15" x 15" x 6-1/8" DEEP 18 GAUGE TYPE 304 STAINLESS STEEL SELF RIMMING SINK, 1 HOLE PUNCHING, SUPPLY FITTING: CHICAGO MODEL 50-317 DECK MOUNTED RIGID/SWING 13-3/8" GOOSENECK SPOUT, WITH 317 INDEXED LEVER HANDLES. CHICAGO E35JKCP AERATOR 1.5 GPM, PROVIDE LK-35 BASKET STRAINER, 1-1/2" TRAP ASSEMBLY, AND 1/2" x 3/8" 1/4 TURN BALL VALVE ANGLE STOPS, WITH FLEXIBLE TUBE RISERS.

**S5** – SINK (DECON):  
ELKAY MODEL #WNSF8124LR, 72" X 27-1/2" x 14" DEEP, 1 COMPARTMENT WITH LEFT AND RIGHT DRAIN BOARD, 14 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL SINK. STEEL WITH TUBULAR, ADJUSTABLE SUPPORT LEGS, 1/4" RADIUS COVED CORNER COMPARTMENTS MEET NSF REQUIREMENTS. SUPPLY FITTINGS: CHICAGO MODEL 509-GCL, 9-1/2" SWING SPOUT WALL MOUNTED FAUCET WITH RINSE SPRAY VALVE. 613A ADAPTA FAUCET WITH 317 WRISTBLADE HANDLES 5'-0" FLEXIBLE STAINLESS STELL HOSE WITH PRE-RINSE SPRAY VALVE WITH INSULATED HANDLE. PROVIDE FLANGE FOR SPRAY HOSE, PROVIDE LK-35 STRAINERS FOR BOTH COMPARTMENTS. PROVIDE 1-1/2" TRAP ASSEMBLY, MAXIMUM OF 3.0 GPM.

**S6** – DECON SINK FOR BODY BOARD:  
CUSTOM MADE STAILESS STEEL REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFICATIONS, SUPPLY FITTINGS: CHICAGO MODEL 509-GCL, 9-1/2" SWING SPOUT WALL MOUNTED FAUCET WITH RINSE SPRAY VALVE. 613A ADAPTA FAUCET WITH 317 WRISTBLADE HANDLES 5'-0" FLEXIBLE STAINLESS STEEL HOSE WITH PRE-RINSE SPRAY VALVE WITH INSULATED HANDLE. PROVIDE FLANGE FOR SPRAY HOSE, PROVIDE LK-35 STRAINERS FOR BOTH COMPARTMENTS. PROVIDE 1-1/2" TRAP ASSEMBLY, AND 1/2" x 3/8" ANGLE STOPS, WITH FLEXIBLE TUBE RISERS. MAXIMUM OF 3.0 GPM. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HIEGHT OF FAUCET.

**S7** – APPURATUS BAY(WALL HUNG, WITH EYE WASH):  
ELKAY MODEL #EWS3120FC, WALL HUNG STAINLESS STEEL, 14 GAUGE TYPE 304 STAINLESS STEEL, WITH 1-3/4" RADIUS VERTICAL AND HORIZONTAL COVED CORNERS, 6" HIGH BACK SPLASH, PROVIDE WITH WALL HANGER SUPPORT, FURNISH WITH LK398C WALL HUNG, DOUBLE FOOT PEDAL VALVE, ELKAY # 395CA C.P 8-1/4" HIGH GOOSENECK SPOUT WITH AE19A VANDAL RESISTANT ANTI-HOSE AERATOR, AND LK18B STAINLESS STEEL GRID DRAIN FITTING WITH 1-1/2" O.D. TAILPIECE.

**ID1** – TRENCH DRAIN:  
J.R. SMITH / ACO #9812 SERIES HIGH CAPACITY, 8" WIDE PRESLOPED FIBERGLASS TRENCH DRAIN SYSTEM WITH CAST IRON SLOTTED GRATE AND 4" BOTTOM OUTLET. PROVIDE TRAP GUARD AS SPECIFIED BELOW.

**ID2** – TRENCH DRAIN (SHOWER ENTRANCE): (ALTERNATE)  
BLÜCHER BWS-100 SERIES, AISI TYPE 304 STAINLESS STEEL 3-3/4" WIDE X (SPECIFY) LONG "WATERLINE" SHOWER CHANNEL WITH MEMBRANE CLAMP, VIENNA GRATING (STANDARD), AND NO HUB BOTTOM OUTLET. (USED AT ROLL-IN SHOWER UNITS)

**HB** – HOSE BIBB:  
WOODFORD MODEL # 24P, 3/4" INLET, NON-REMOVABLE VACUUM BREAKER, LOOSE KEY OPERATOR.

**ED** – FLOOR DRAIN:  
J.R. SMITH #2005-A (ZURN #ZN-415-B, WADE #W-1100) DUCO CAST IRON DRAIN BODY WITH 5" DIAMETER ADJUSTABLE NICKEL BRONZE STRAINER (WITH PHILLIPS SCREW), AND NO-HUB OUTLET CONNECTION. PROVIDE IG TRAP GUARD AS SPECIFIED.

**ECQ** – FLOOR CLEANOUT:  
J.R. SMITH 4023 (ZURN Z2-1400-2, WADE W-6000-75 CAST IRON ADJUSTABLE TYPE WITH SERRATED CUT-OFF SECTIONS, THREADED BRONZE PLUG, SCORAIATED NICKEL BRONZE COVER PLATE, AND CENTER COVER PLATE SECURING SCREW WITH COUNTERSUNK HEAD.

**WCO** – WALL CLEANOUT:  
J.R. SMITH 4532 (ZURN ZN-1445, WADE W-8560) CAST IRON BRANCH CLEANOUT TEE WITH BRONZE COUNTERSUNK PLUG, ROUND STAINLESS STEEL ACCESS COVER.

**RD** – ROOF DRAIN:  
J.R. SMITH #1010 CAST IRON ROOF DRAINS WITH FLASHING COLLAR AND CAST IRON DOME. FURNISH EXTENSION (SUFFIX-E) FOR INSULATED ROOFS. SUMP RECEIVER (SUFFIX-R) AND UNDERDECK CLAMP (SUFFIX-C) FOR ALL BUT POURED-IN-PLACE INSTALLATIONS. OUTLET CONNECTION TYPE SHALL BE COMPATIBLE WIOTH PIPING SYSTEM. PROVIDE LEAD FLASHING FOR ALL ROOF DRAINS.

**QD** – OVERFLOW ROOF DRAIN:  
J.R. SMITH #1070 WITH SAME FEATURES AS DESCRIBED FOR "ROOF DRAINS". STANDPIPES SHALL BE ADJUSTED AND SECURED #3 THAT AFTER THE INSTALLATION OF THE DRAIN ASSEMBLY, THE TOP OF THE STANDPIPE SHALL BE (2") ABOVE THE ADJACENT ROOF SURFACE.

**SO1** – SAND/OIL INTERCEPTOR:  
UTILITY VAULT COMPANY, MODEL #5106-GA: 1500 GALLON CAPACITY UNIT AS NOTED ON DRAWINGS. COMPLETE WITH CAST IRON TRAFFIC RINGS AND COVER, EXTENSION RINGS AS REQUIRED TO MEET GRADE, REMOVABLE TOP COVERS, HOLDING PARTITION AND FLOW FITTINGS AXLE OF 58,000 LBS TANDEM.

**CA1** – AIR COMPRESSOR:  
CHAMPION CENTURY II MODEL VRV7F-6, 60 GALLON, 7.5 HP, 990 RPM, TWO STAGE AIR COMPRESSOR AND PUMP, LUBRICATED, AIR COOLED RECIPROCATING TYPE WITH V-BELT DRIVE, TANK MOUNTED AND AIR COOLED. COMPRESSOR FRAME SHALL BE OF CAST IRON CONSTRUCTION. MOTORS SHALL BE DRIPPROOF WITH A 1.15 SERVICE FACTOR. MANUFACTURER'S STANDARD MOTOR HORSEPOWER RATING COMPATIBLE WITH COMPRESSOR PERFORMANCE REQUIREMENTS IS ACCEPTABLE. COMPRESSOR PACKAGE SHALL BE CAPABLE OF DELIVERING LISTED CFM FREE AIR AT THE DISCHARGE PRESSURE CONTINUOUSLY WITHOUT UNLOADING AND A MAXIMUM OPERATING PRESSURE OF 175 PSIG. CAPACITY REGULATION SHALL BE PROVIDED SUCH THAT THE SYSTEM SHALL DELIVER ONLY THE COMPRESSED AIR REQUIRED (0 TO 100% DESIGN CFM). THE COMPRESSOR SHALL BE CAPABLE OF OPERATING IN A MAXIMUM AMBIENT TEMPERATURE OF 125°F. UNIT SHALL BE START/STOP OPERATION. MOTOR STARTER SHALL BE MAGNETIC TYPE, COMPATIBLE WITH THE ELECTRICAL AND PERFORMANCE CHARACTERISTICS OF THE MOTOR. THE MOTOR STARTER SHALL BE CONTAINED WITHIN THE STANDARD COMPRESSOR PACKAGE AND SHALL BE FULLY PREWIRED SUCH THAT ONLY THE MAIN POWER LEADS NEED BE CONNECTED TO MAKE THE SYSTEM FULLY OPERABLE. THE PACKAGE SHALL INCLUDE AN AIR-COOLED AFTER COOLER WITH A 25°F APPROACH, FACTORY INSTALLED AS INTEGRAL PARTS OF THE COMPRESSOR PACKAGE, AND AN AUTOMATIC CONDENSATE DRAIN TRAP, PIPED TO TERMINATE AS SHOWN ON THE PLANS.

**EV** – FILL VALVE (WITH BACKFLOW PREVENTER):  
POTTER-ROEMER MODEL 4415, THREAD-TYPE BALL FILL VALVE, 1-1/2" FEMALE x MALE 500 PSI PRESSURE RATED WITH MAXIMUM GPM OF 250. PROVIDE VACUUM BREAKER, WATTS MODEL 800M3-QT PRESSURE TYPE VACUUM BREAKER DIRECTLY UPSTREAM OF FILL VALVE.

**BP** – BACKFLOW PREVENTER:  
WATTS SERIES 909M1QT-2" INLET AND OUTLET CONNECTION. QUARTER TURN FULL PORT BRONZE BALL VALVE, DOUBLE CHECK VALVES, CONSTRUCTED OF BRONZE BODY AND CAP AND STAINLESS STEEL SPRINGS. SHALL MEET ASME STANDARD 1015, AWWA STANDARD C506-78, AND BE RATED AT 175 PSI WATER PRESSURE.

**AHR** – AIR HOSE REEL:  
COXREEL MODEL P-1P-350 HEAVY DUTY AIR HOSE REEL, 3/8" AIR HOSE WITH 1/2" PLATE STEEL MOUNTING PLATE, SELF LUBRICATING BEARINGS, SWIVEL JOINT, AUTO REWIND REEL, 4 ROLLER NON-SNAG HOSE GUIDE AND LOCKING RATCHET. PROVIDED WITH 3/8" 50 FOOT LONG 300 P.S.I. HOSE.

**WHR** – WATER HOSE REELS:  
COXREEL MODEL 1125-5-175 HEAVY DUTY HOSE REEL, WITH 1/2" PLATE STEEL MOUNTING PLATE, SELF LUBRICATING BEARINGS, SWIVLE JOINT, SPRING MOTOR, 4 ROLLER NON-SNAG HOSE GUIDE AND LOCKING RATCHET. PROVIDE WITH 3/4" I.D 1-1/4" O.D. 175 FOOT LONG 300 P.S.I. HOSE. PROVIDE THREADED VACUUM BREAKER AT SERVICE END.

**MS1** – SERVICE SINK:  
FIAT MODEL MSB-2424, 24" x 24" x 10", FLOOR MOUNTED, MOLDED STONE MOP SINK WITH INTEGRAL STAINLESS STEEL STRAINER EXTENSION. SUPPLY FITTING: CHICAGO FAUCETS MODEL 897 CHROME PLATED SUPPLY FITTING WITH INTEGRAL STOPS, VACUUM BREAKER, 3/4" HOSE THREAD SPOUT AND WALL BRACE. MOUNT FITTING AT 24" ABOVE FINISHED FLOOR. HOSE: FIAT 832-AA, 30" HEAVY DUTY FLEXIBLE 3/4" RUBBER HOSE AND WALL BRACKET. SEALANT: FIAT 833-AA SILICONE SEALANT INSTALLED IN ACCORDANCE WITH MANUFACTURER. MOP HANGER: FIAT 889-CC 18 GAUGE TYPE 302 STAINLESS STEEL MOP HANGER, SEE ARCHITECTURAL DRAWINGS FOR STAINLESS STEEL WALL BACK SPLASH AND LOCATION.

**MS2** – SERVICE SINK:  
FIAT MODEL TSB3000, 24" x 24" x 12", FLOOR MOUNTED, MOLDED STONE MOP SINK WITH INTEGRAL STAINLESS STEEL STRAINER EXTENSION. SEE ARCHITECTURAL DRAWINGS FOR STAINLESS STEEL WALL BACK SPLASH AND LOCATION. 4" DRAIN.

**MS3** – SERVICE SINK:  
FIAT MODEL MSB-36424, 36" x 24" x 10", FLOOR MOUNTED, MOLDED STONE MOP SINK WITH INTEGRAL STAINLESS STEEL STRAINER EXTENSION. SUPPLY FITTING: CHICAGO FAUCETS MODEL 897 CHROME PLATED SUPPLY FITTING WITH INTEGRAL STOPS, VACUUM BREAKER, 3/4" HOSE THREAD SPOUT AND WALL BRACE. MOUNT FITTING AT 24" ABOVE FINISHED FLOOR. HOSE: FIAT 832-AA, 30" HEAVY DUTY FLEXIBLE 3/4" RUBBER HOSE AND WALL BRACKET. SEALANT: FIAT 833-AA SILICONE SEALANT INSTALLED IN ACCORDANCE WITH MANUFACTURER. MOP HANGER: FIAT 889-CC 18 GAUGE TYPE 302 STAINLESS STEEL MOP HANGER, SEE ARCHITECTURAL DRAWINGS FOR STAINLESS STEEL WALL BACK SPLASH AND LOCATION.

**RHB** – ROOF MOUNTED HOSE BIBB HYDRANT FREEZELESS:  
WOODFORD MODEL #RHY1-MS, 3/4" INLET, NON-REMOVABLE VACUUM BREAKER, CAST IRON HYDRANT SUPPORT, EPDM BOOT TO COVER WELL SEAL AND TOP OF HYDRANT SUPPORT.

**PE** – POT FILLER KITCHEN:  
ROHL MODEL A1451X, DUAL QUART TURN VALVES WITH 5 SPOKE HANDLES, TWO PIVOT POINT 25" EXTENSION ARM, INSTALL ABOVE RANGE OVEN, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND HEIGHT.

**ES** – FLOOR SINK:  
J.R. SMITH #3150-Y CAST IRON FLANGED RECEPTOR, ACID RESISTANT COATED INTERIOR, ALUMINUM DOME BOTTOM STRAINER; SQUARE NICKEL BRONZE TOP WHEN REQUIRED. PROVIDE IG TRAP GUARD AS SPECIFIED.

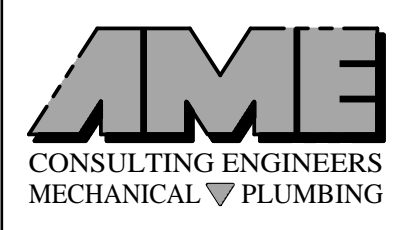
**IG** – TRAP GUARD: (TRAP PRIMER ALTERNATE)  
PROVENT TRAPGUARD ELASTOMERIC DEVICE UTILIZING A NORMALLY CLOSED SEAL TO PREVENT EVAPORATION OF THE TRAP SEAL AND TO PREVENT SEWER GASES FROM BACKING UP INTO HABITABLE AREAS. DEVICE SHALL BE DESIGNED TO OPEN WITH FLUID ALLOWING LIQUID DRAINAGE TO FLOW THROUGH INTO THE BUILDING DRAIN. PRODUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE REQUIREMENTS OF THE APPLICABLE CODES. DEVICE SHALL BE INSTALLED INSIDE SPECIFIED WATTS DRAINAGE FLOOR DRAIN TAIL PIECE. THIS DEVICE SHALL COMPLY WITH ASSE 1072, ICC-ES EPG-1091; 2006 IPC SEC. 105.2 SEC. 1002.4 TRAP SEALS, 2006 IRC SEC. R104.1.1 SEC. P3201 TRAP SEALS, 2006 UPC SEC. 301.2 SEC. SANITARY DRAINAGE, NSF14 PLASTIC PIPING SYSTEM COMPONENTS & RELATED MATERIALS AND CAN/CSA B602-06 ELASTOMERIC MECHANICAL COUPLINGS FOR DWV PIPE.

**WHA** – WATER HAMMER ARRESTOR:  
PRECISION PLUMBING PRODUCTS INC., THE CONTRACTOR SHALL INSTALL THE WATER HAMMER ARRESTORS IN THE PIPING SYSTEM AS REQUIRED BY THE SIZE OF THE FIXTURE LOAD, BARREL FABRICATED OF TYPE 'K' HARD DRAWN COPPER, THE PISTON AND THREADED ADAPTOR ARE MACHINED OF FREE TURNING BRASS WITH O-RING SEALS. INSTALL IN AN ACCESSIBLE AREA NEAR ACCESS DOOR. COMPLETE WITH A BALL VALVE BEFORE THE TRAP PRIMER.

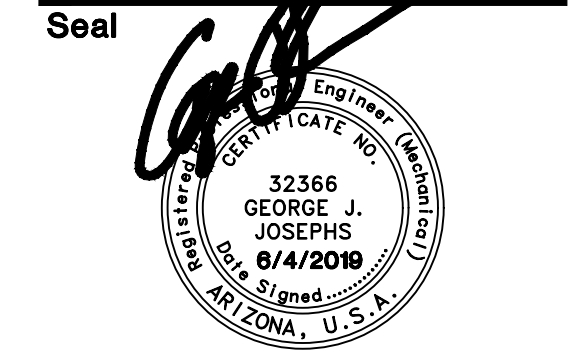
**EXP1** – EXPANSION TANK:  
AMTROL, THERM-X-TROL MODEL PRECHARGE AT 40 PSIG, WITH A MAXIMUM WORKING TEMPERATURE OF 200°F. RELIEF VALVE MUST BE SET AT 150 PSIG.

**AAV** – AIR ADMITTANCE VALVE:  
STUDOR, INC. "TEC-VENT" MODEL 20344 AIR ADMITTANCE VALVE TO BE LOCATED AT VENT TERMINATIONS AS INDICATED ON DRAWINGS TO PREVENT SIPHONAGE OF A FIXTURE TRAP. PRODUCT SHALL BE CONSTRUCTED OF FLAME RETARDANT POLYCARBONATE RESIN OR AN SILICONE MEMBRANE AND SHALL INCLUDE SCREENING ON THE INSIDE AND OUTSIDE OF VALVE TO PROTECT THE MEMBRANE FROM FOULING. VALVE SHALL BE UV RATED AND HAVE A LIFETIME WARRANTY. ASSE 1051 CERTIFIED, NSF STANDARD 14, UL-2043, IPC & UPC APPROVALS.

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Rev	Date	By	Description
1	7-17-19	-	CITY COMMENTS

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**Fire Station No. 705**  
30551 W. Tartesso Pkwy.  
Buckeye, AZ 85396

**1ST SUBMITTAL**

Drawn/Checked By

/ GJJ

Date

07-17-19

Project Number

318009

Sheet Number

PLUMBING PLAN  
SANITARY SEWER

**P2.1**

# KEYED NOTES:

1. EXTEND SANITARY SEWER 5'-0" FROM BUILDING. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
2. PRIMARY AND OVERFLOW RAINWATER LEADER DOWN FROM ROOF DRAINS MOUNTED IN ROOF.
3. PRIMARY RAINWATER LEADER TO EXTEND DOWN BELOW FLOOR/GRADE AND EXTEND OUT 5'-0" FROM BUILDING AND OVERFLOW RAINWATER LEADER DOWN ALONG WALL, EXTEND OUT OF BUILDING AND TERMINATE AT EDGE OF BUILDING WITH DOWN SPOUT NOZZLES J.R. SMITH MODEL NO. 1770. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATION OF DOWN SPOUT A.F.G..
4. EXTEND PRIMARY RAINWATER LEADER 5'-0" FROM BUILDING REFER TO CIVIL FOR CONTINUATION.
5. GAS DOWN IN WALL TO RANGE / OVEN. REFER TO GAS SCHEMATIC FOR NOTES AND PIPE SIZES.
6. GAS DOWN ALONG WALL IF CONCRETE AND IN WALL AT FURRED WALL TO GAS CLOTHES DRYER.
7. GAS DOWN IN WALL TO GAS SHUT-OFF VALVE AND UNION @ 24" A.F.F FOR BBQ ON EXTERIOR OF BUILDING. REFER TO GAS SCHEMATIC FOR NOTES AND PIPE SIZES.
8. GAS METER AND REGULATOR BY LOCAL GAS COMPANY. GENERAL CONTRACTOR AND PLUMBING CONTRACTOR SHALL COORDINATE GAS METER AND REGULATOR AND GAS LOAD WITH GAS COMPANY.

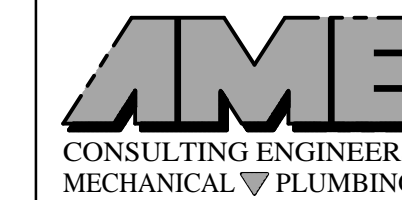
**NOTE - NO EXCEPTIONS:**

USE OF FOAM CORE PLASTIC PIPING ABOVE AND BELOW GRADE SHALL BE AT CONTRACTOR'S RISK. REFER TO ASTM/ASME INSTALLATION STANDARDS FOR PROPER BEDDING AND BACKFILLING. AME SHALL NOT BE HELD RESPONSIBLE FOR ANY PIPE FAILURES RESULTING FROM USE OF FOAM CORE PIPING.

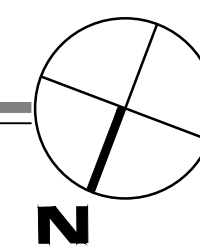
**1 PLUMBING PLAN**

SCALE: 1/8" = 1'-0"

AME PROJECT # 19-017



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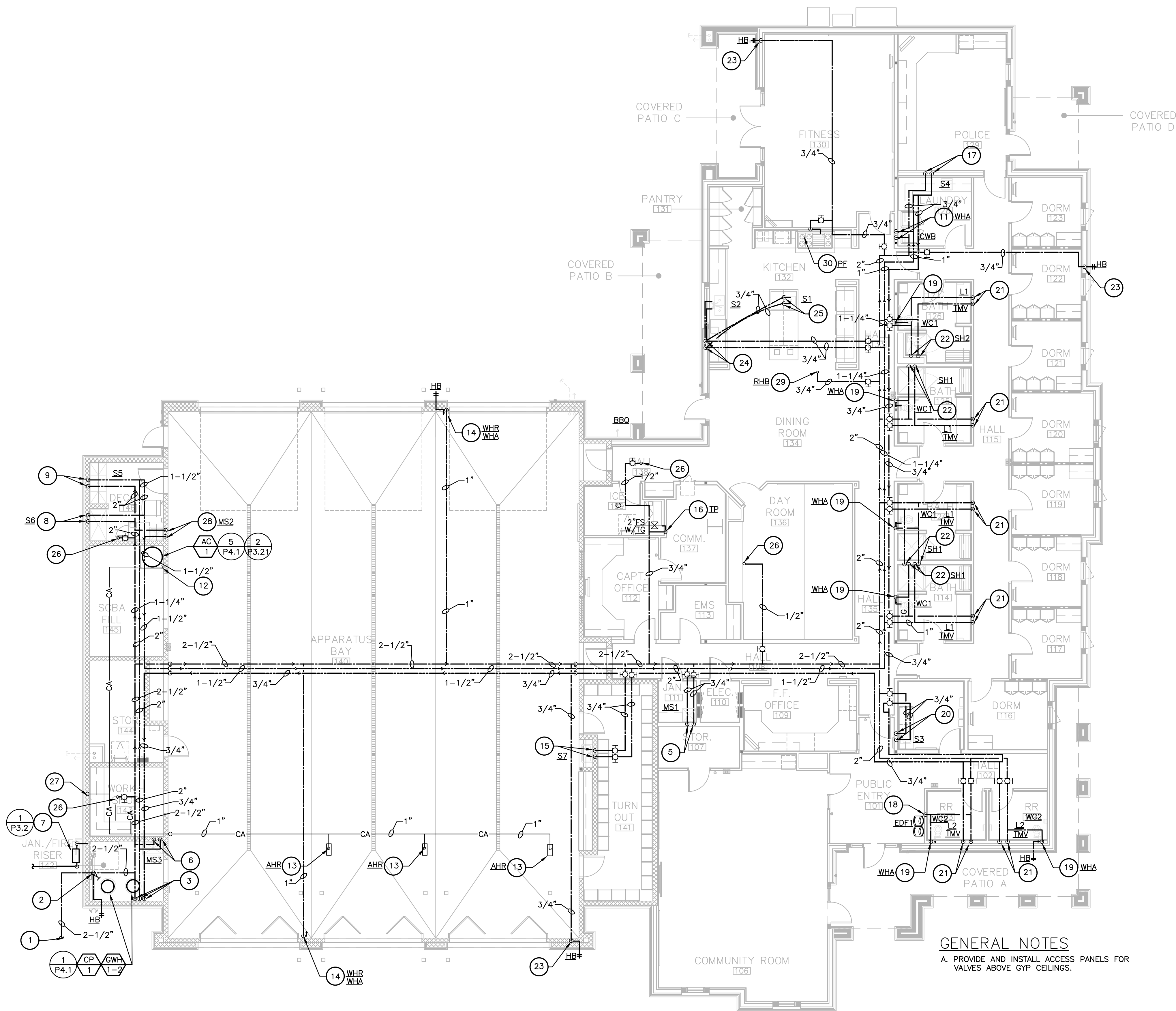
## P2.2

1. EXTEND DOMESTIC CW 5'-0" FROM BUILDING, REFER TO CIVIL DRAWINGS FOR CONTINUATION.
2. 2-1/2" DOMESTIC CW RISER WITH SHUT-OFF VALVE IN RISE, EXTEND 3/4" CW TO HOSE BIBB DOWN STREAM OF SHUT-OFF VALVE AND EXTEND 2-1/2" CW UP INTO OPEN STRUCTURAL SPACE.
3. 2" HW, 2" CW AND 3/4" HWR DOWN IN WALL TO GAS WATER HEATERS (2), EXTEND FULL SIZE T&P RELIEF TO FLOOR SINK, PROVIDE 2" AIR GAP AT FLOOR SINK FROM ALL DRAIN PIPES TERMINATING AT THIS LOCATION.
4. GAS PIPING DOWN IN WALL TO GAS FIRED WATER HEATERS.
5. 3/4" HW AND 3/4" CW DOWN IN WALL TO MOP SINK.
6. 3/4" HW AND 3/4" CW DOWN IN WALL, 3/4" HW AND 3/4" CW TO HAND SINK.
7. GAS METER AND REGULATOR BY LOCAL GAS COMPANY, REFER TO GAS SCHEMATIC FOR PIPE SIZES AND NOTES.
8. 3/4" HW AND 3/4" CW DOWN IN WALL TO BODY BOARD TROUGH FAUCET.
9. 3/4" HW AND 3/4" CW DOWN IN WALL TO WASH UP SINK.
10. 3/4" CW DOWN IN WALL TO HOSE BIBB.
11. 3/4" HW AND 3/4" CW DOWN IN WALL TO CLOTHES WASHER.
12. 1" CA DOWN ALONG WALL TO AIR COMPRESSOR.
13. 1" CA DOWN TO AIR HOSE REEL (AHR).
14. 1" CW DOWN IN WALL TO WATER HOSE REEL (WHR), PROVIDE WATER HAMMER ARRESTER PRIOR TO CONNECTION OF WATER HOSE REEL.
15. 3/4" HW AND 3/4" CW DOWN IN WALL TO SINK WITH FOOT CONTROLLED FAUCET.
16. 3/4" CW DOWN IN WALL TO ICE MACHINE.
17. 3/4" HW AND 3/4" CW DOWN IN WALL TO SINK.
18. 1/2" CW DOWN IN WALL TO DRINKING FOUNTAIN.
19. 1-1/2" CW DOWN IN WALL, 3/4" CW TO WATER HAMMER ARRESTER, 1-1/2" CW TO WATER CLOSET, EXTEND 3/4" CW TO HOSE BIBB WHERE SHOWN.
20. 3/4" HW AND 3/4" CW DOWN IN WALL TO SINK.
21. 1/2" HW AND 3/4" CW DOWN IN WALL, 1/2" HW AND 1/2" CW TO TMV (THERMOSTATIC MIXING VALVE) AND EXTEND 1/2" TW (TEMPERED WATER) FROM TMV AND 1/2" CW TO LAVATORY.
22. 3/4" HW AND 3/4" CW DOWN IN WALL TO SHOWER.
23. 3/4" CW DOWN IN WALL TO EACH HOSE BIBB.
24. 1" HW AND 1" CW DOWN IN WALL, EXTEND 3/4" HW AND 3/4" CW TO SINK, 1/2" HW TO DISHWASHER, 3/4" HW AND 3/4" CW DOWN BELOW FLOOR TO ISLAND SINK AS SHOWN.
25. 3/4" HW AND 3/4" CW UP FROM BELOW FLOOR TO ISLAND SINK.
26. 1/2" CW UP THROUGH ROOF TO EVAP COOLER OF MAKE-UP AIR UNIT, REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION, PROVIDE SHUT-OFF VALVE (FULL PORT BALL VALVE TYPE) AND UNION AT EQUIPMENT CONNECTION.
27. 1/2" CA DOWN IN WALL TO QUICK DISCONNECT ABOVE COUNTER TOP, COORDINATE EXACT LOCATION AND QUANTITY WITH ARCHITECT AND OWNER PRIOR TO STARTING WORK.
28. 3/4" HW AND 3/4" CW DOWN IN WALL TO CLOTHES WASHER BOX TO SUPPLY EXTRACTOR EQUIPMENT.
29. 3/4" CW UP THOUGH ROOF TO ROOF MOUNTED HOSE BIBB.
30. 1/2" CW DOWN IN WALL TO POT FILLER AT STOVE, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.

A. PROVIDE AND INSTALL ACCESS PANELS FOR VALVES ABOVE GYP CEILINGS.

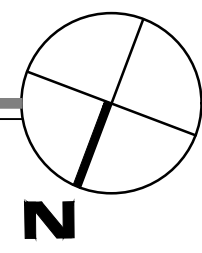
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## 1 PLUMBING PLAN

SCALE:  $1/8" = 1'-0"$



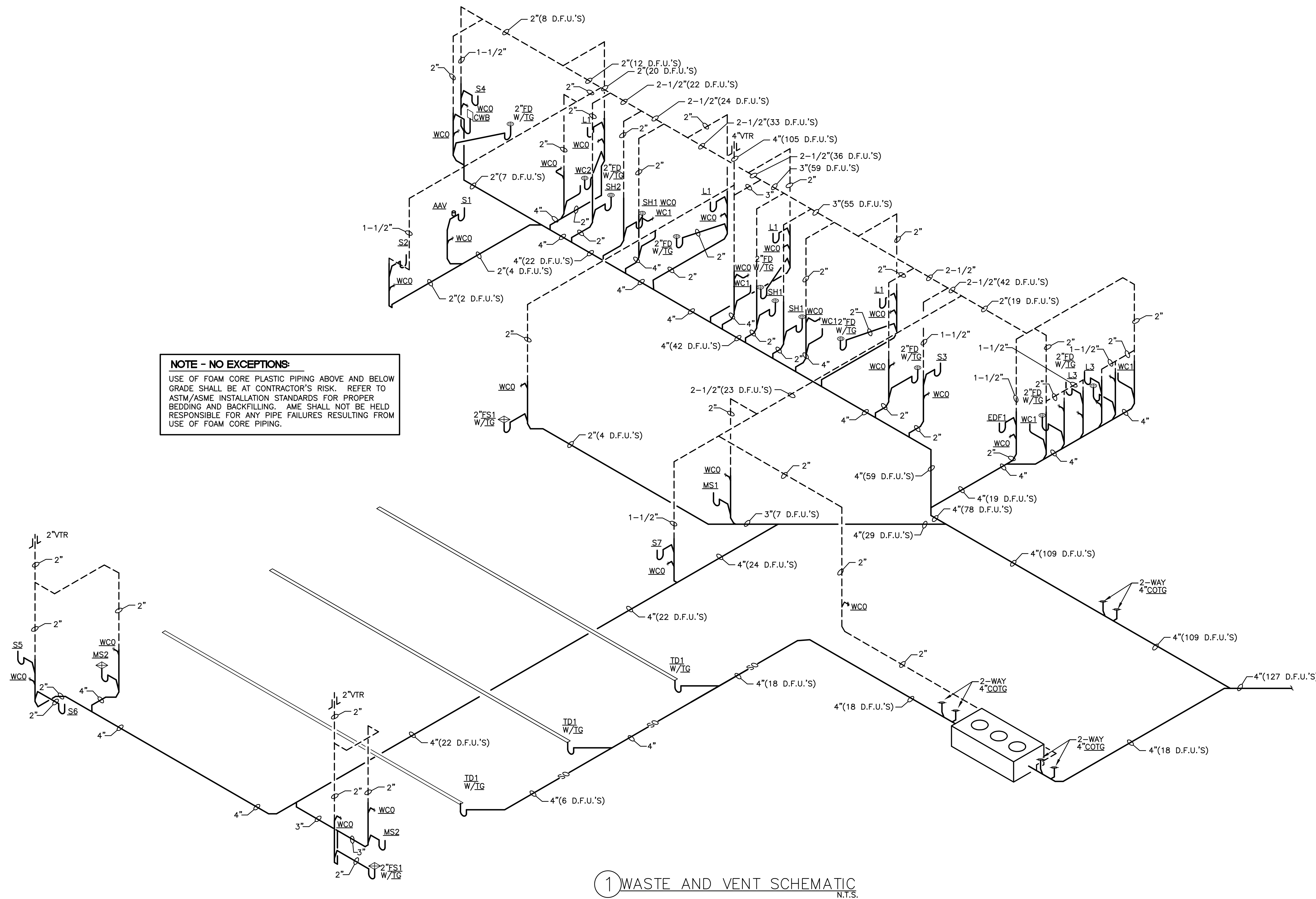
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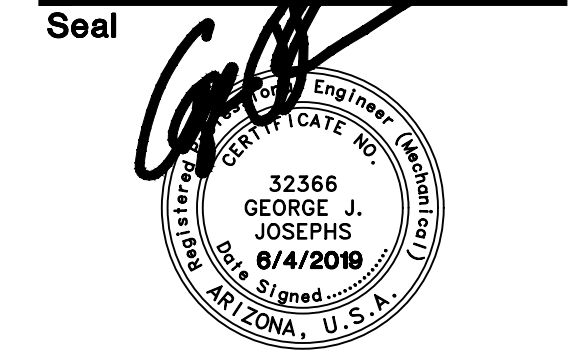
## PLUMBING SCHEMATICS

## P3.1



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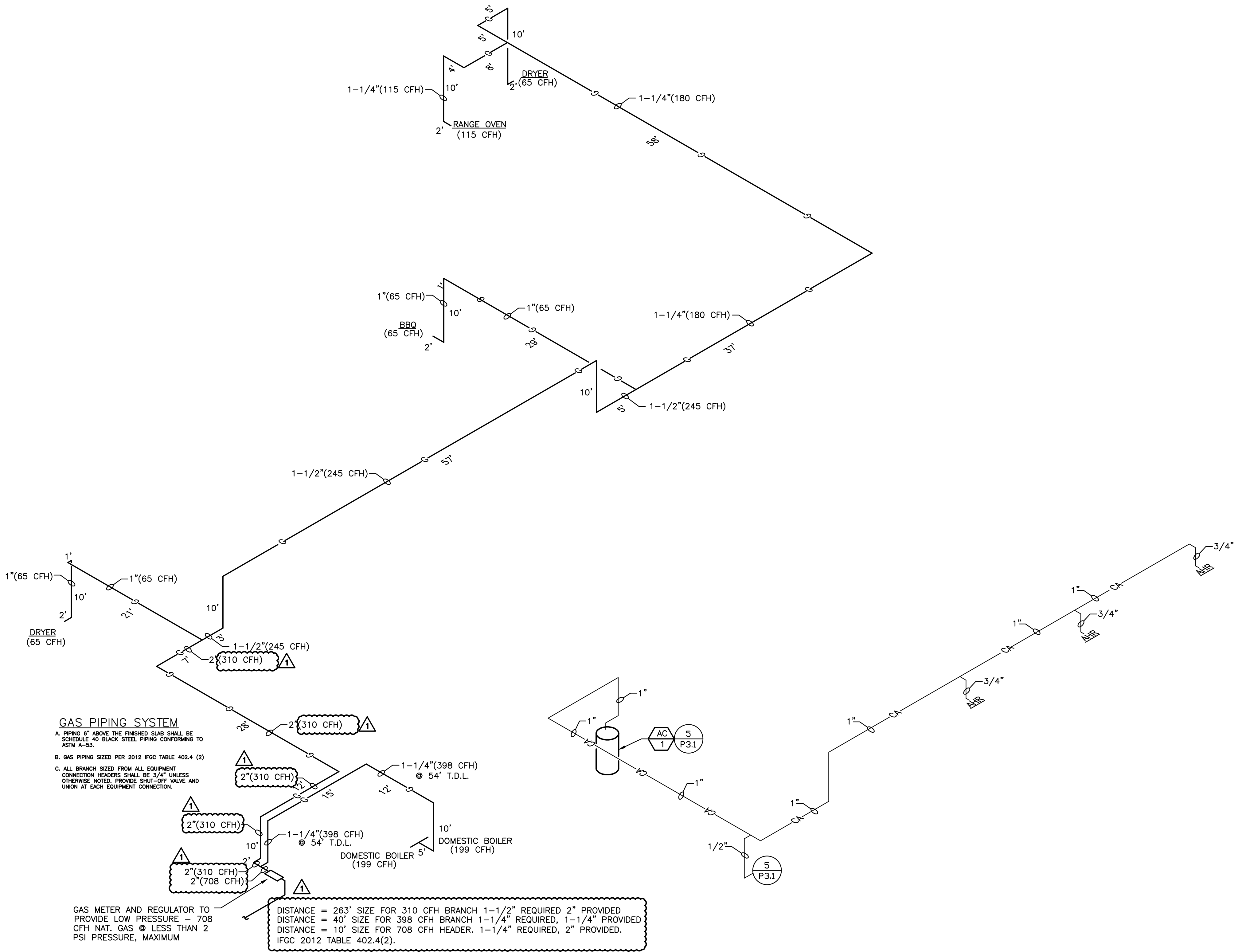
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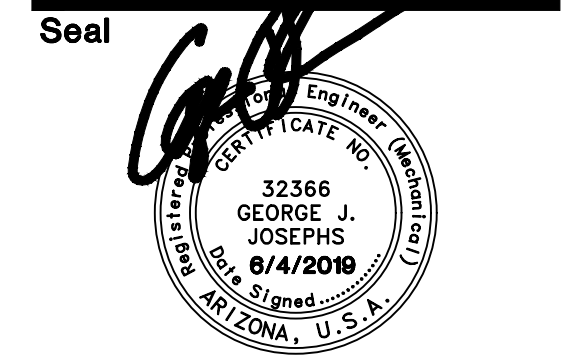


1 **GAS DIAGRAM**  
N.T.S.

2 **COMPRESSED AIR DIAGRAM**  
N.T.S.

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**07-17-19**  
Project Number  
**318009**  
Sheet Number  
**PLUMBING SCHEMATICS**



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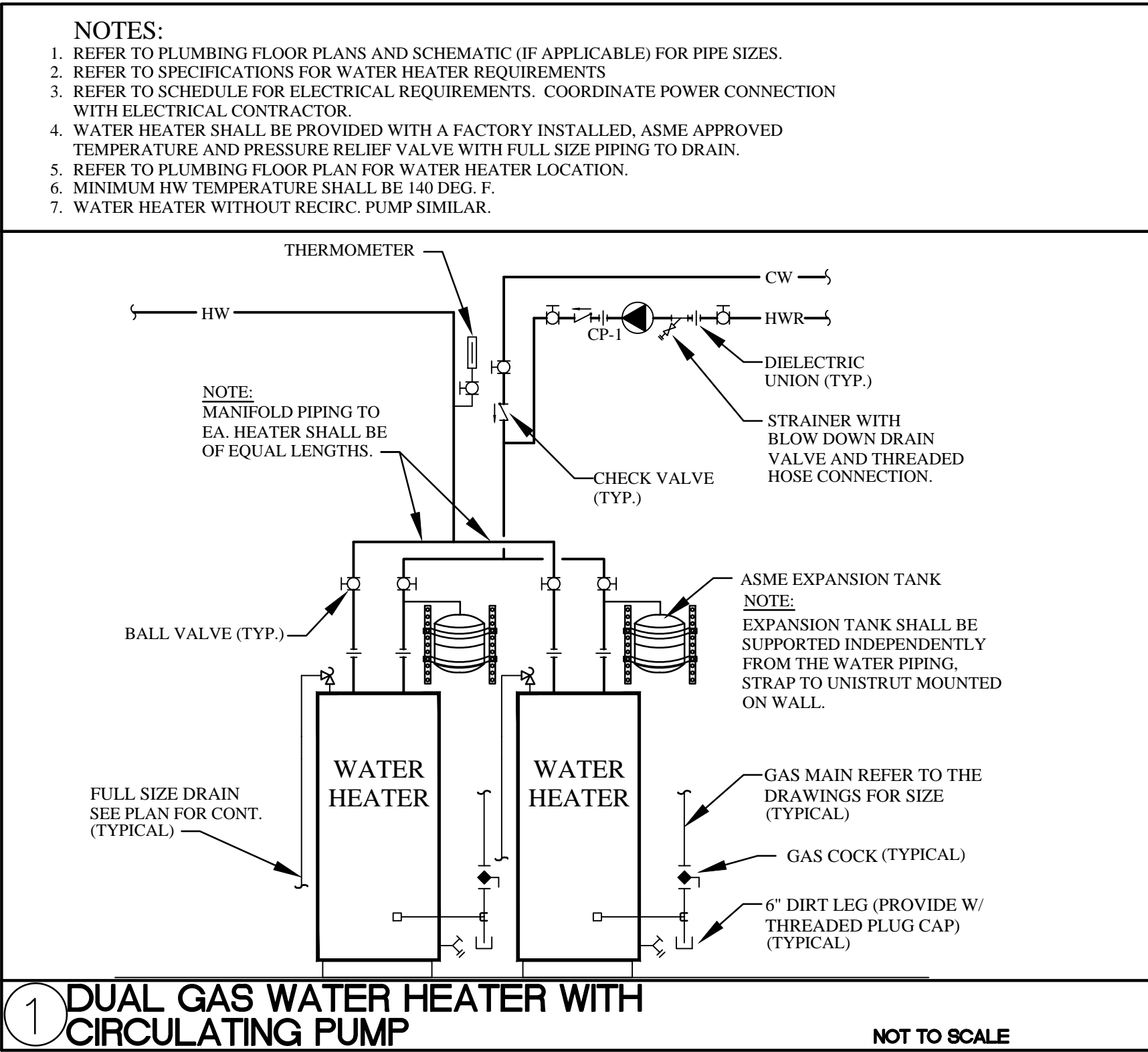
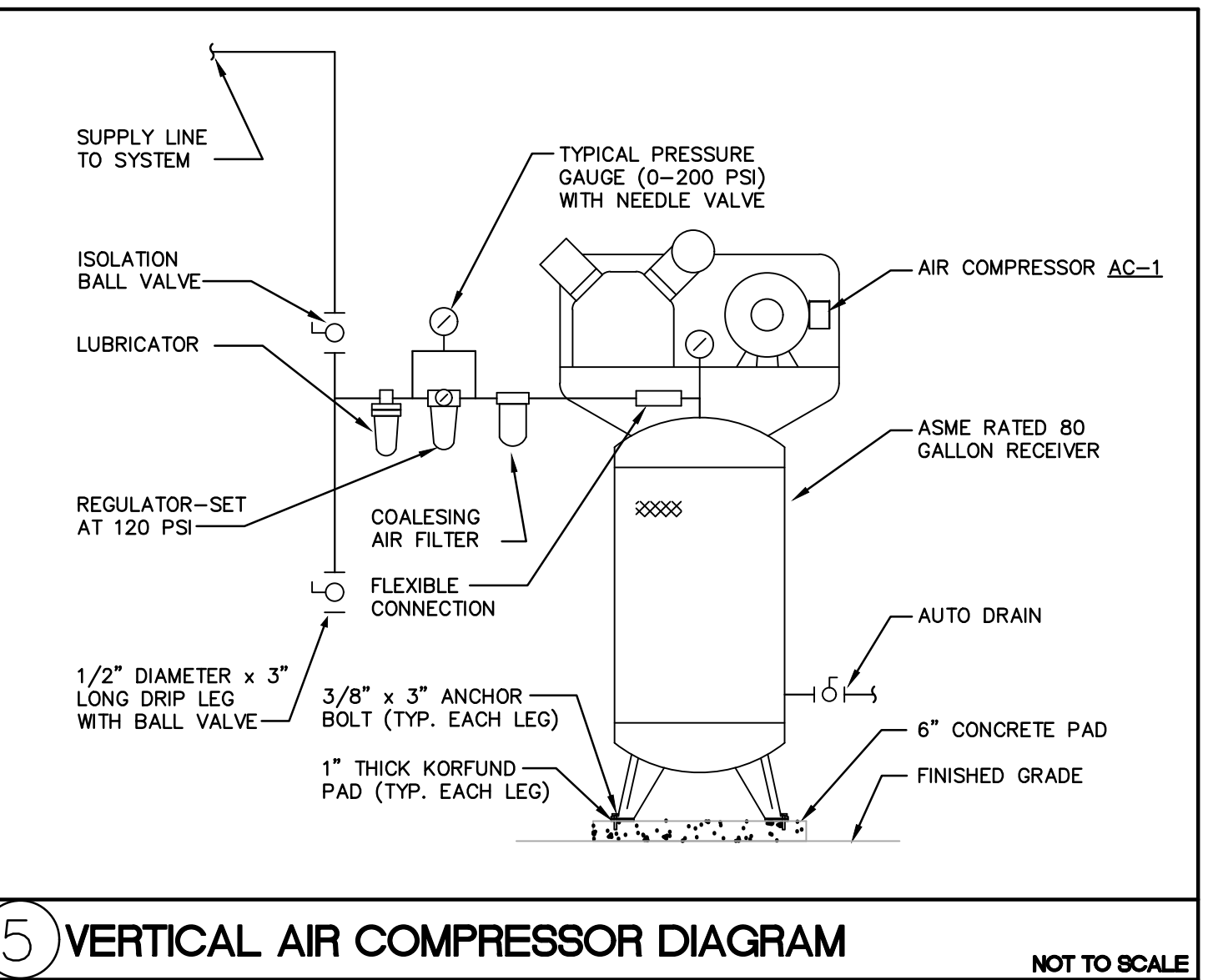
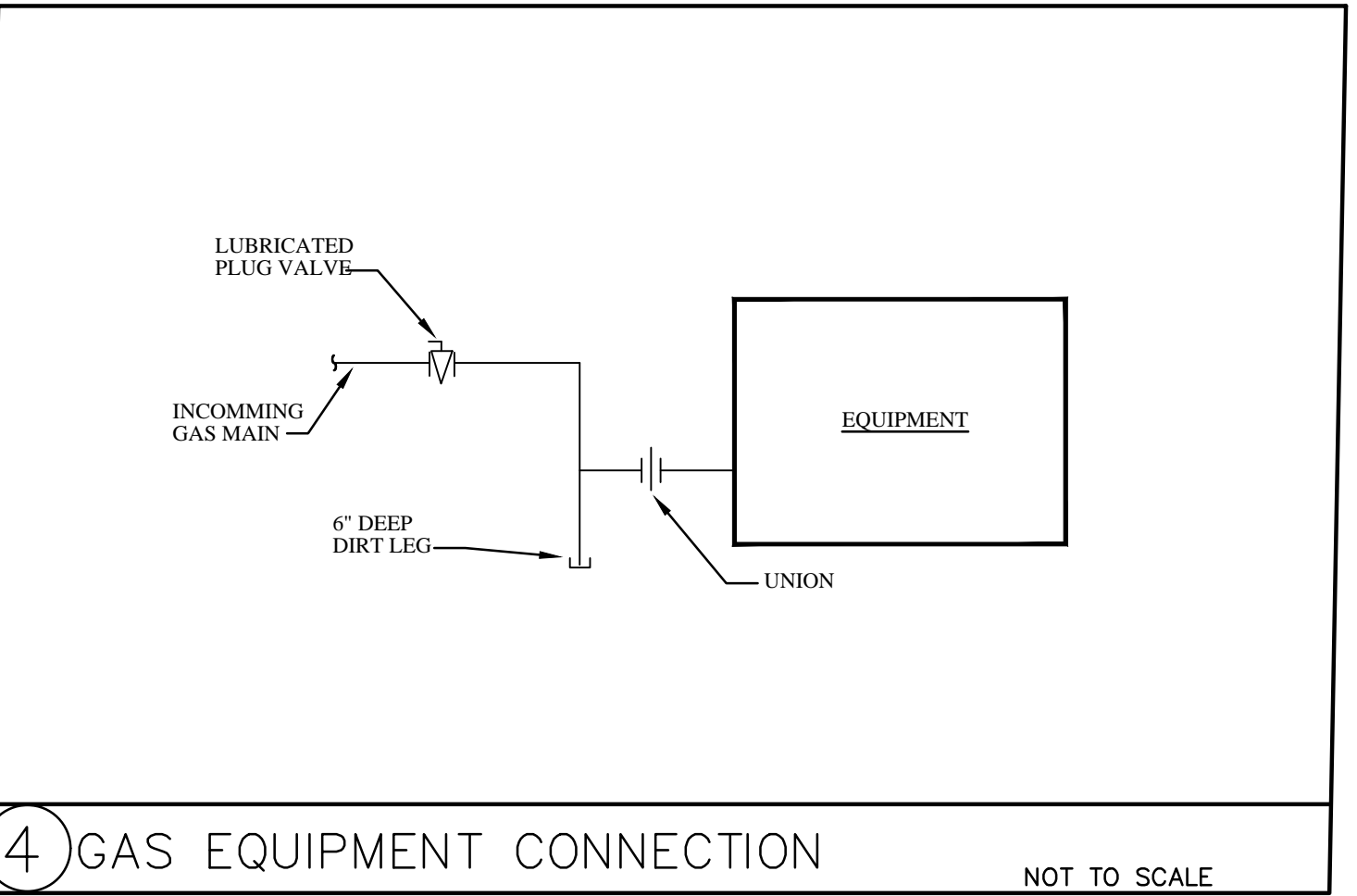
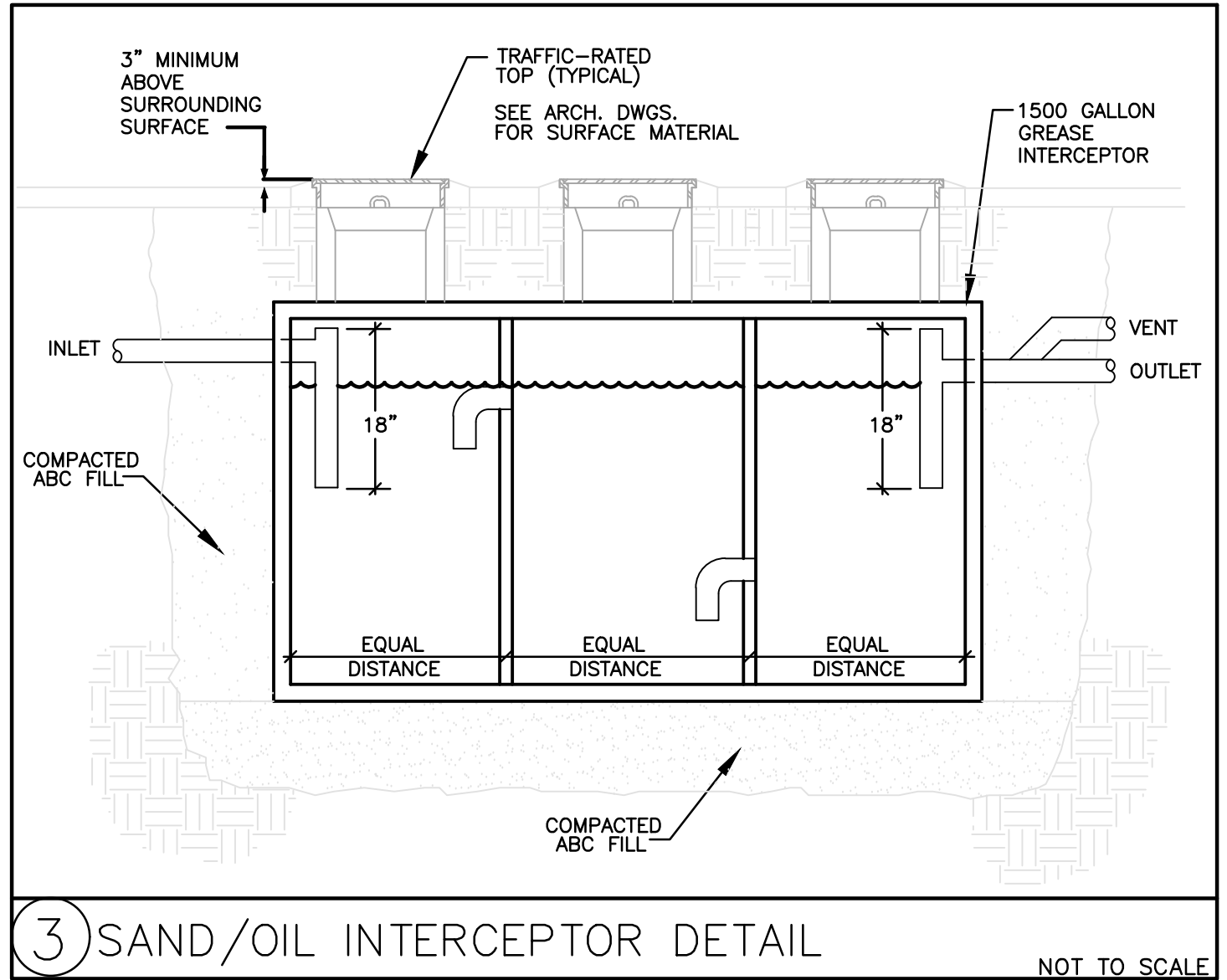
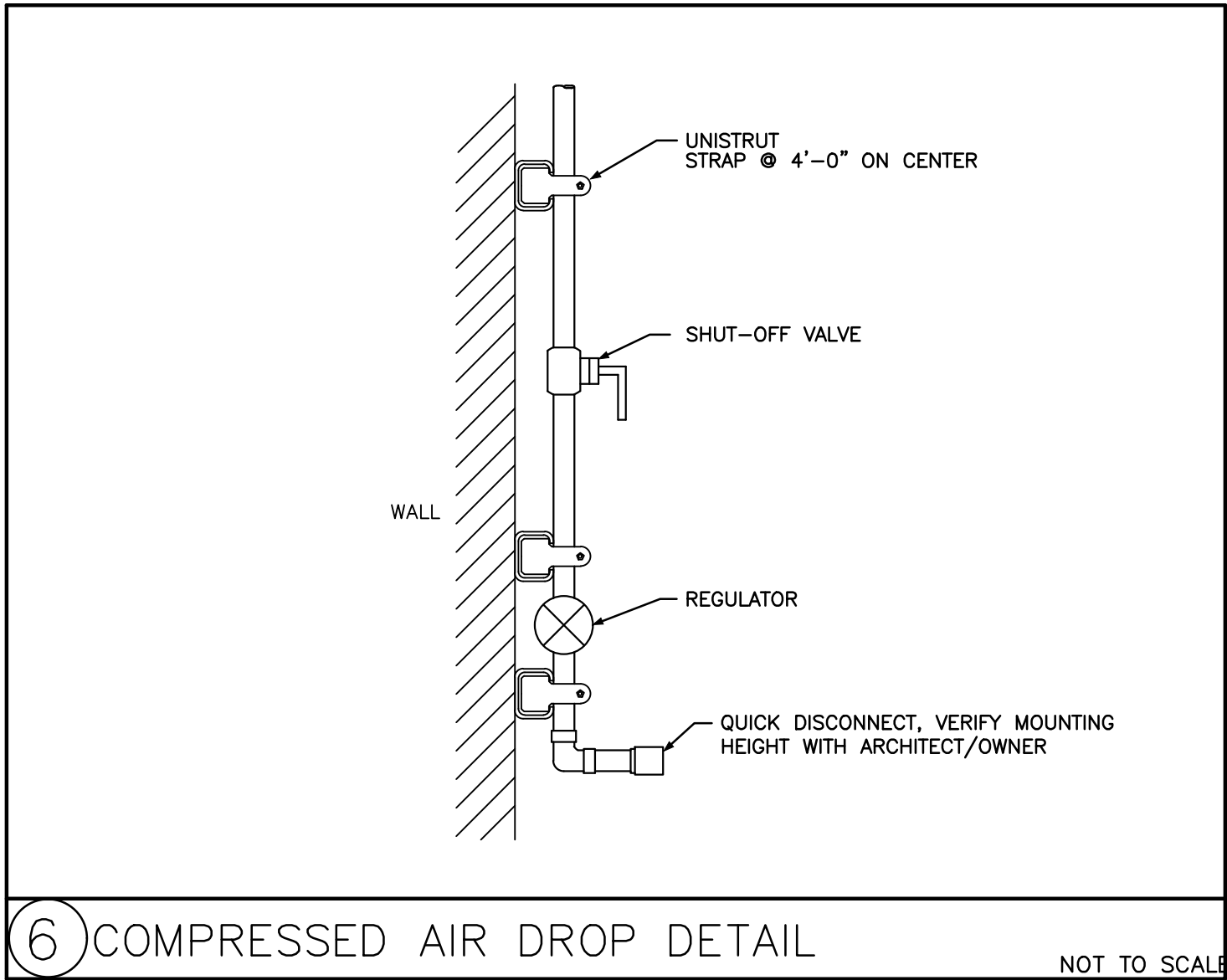
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PLUMBING DETAILS

**P4.1**

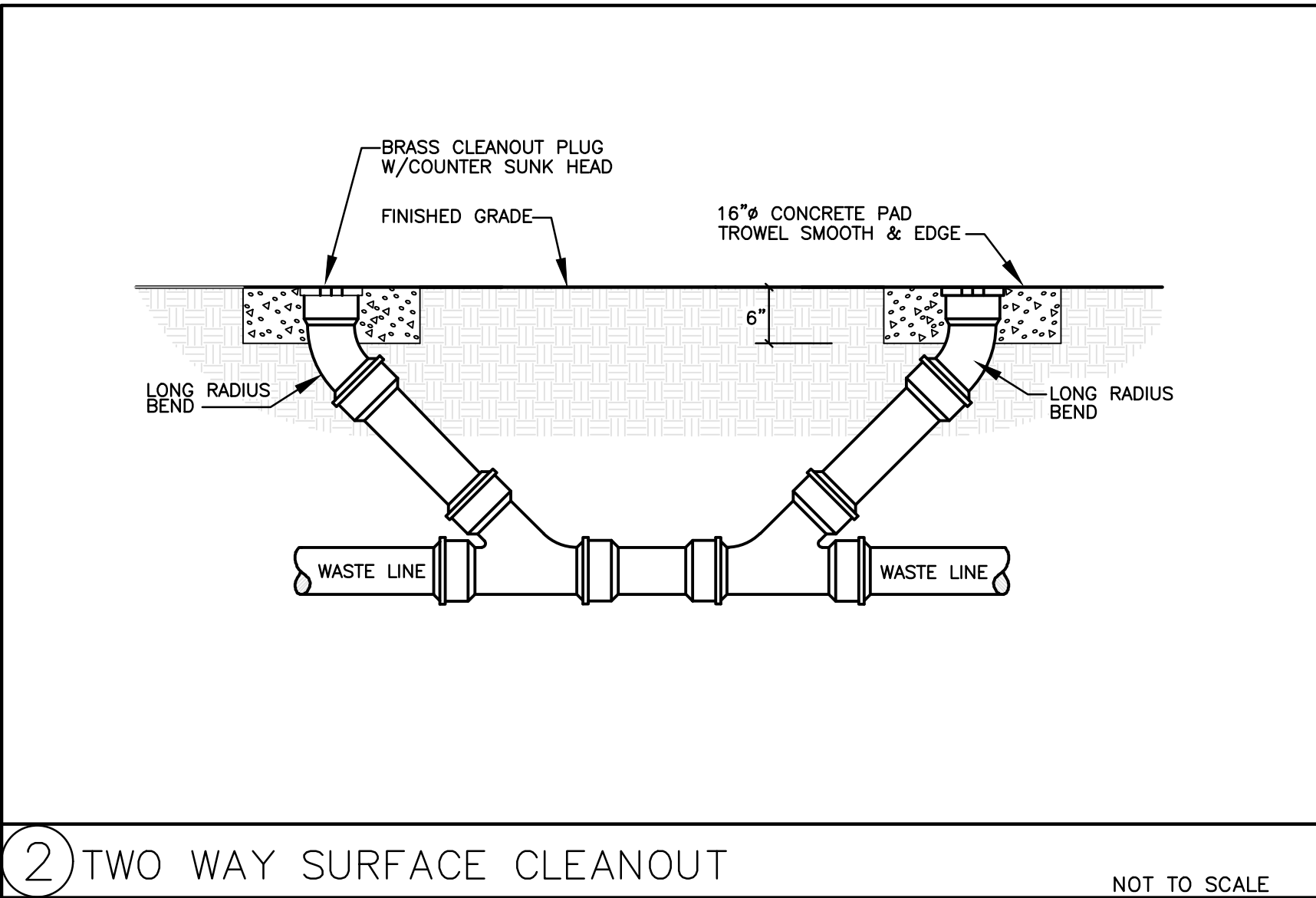


DIRECT VENT GAS WATER HEATER SCHEDULE						
TAG 6WH	MANUFACT.	MODEL	RECOVERY GPH @100' RISE	NATURAL GAS CHARACTERISTICS		REMARKS
				INPUT	OUTPUT	
1-2	A.O. SMITH	BTH-199	227	199,000	187,060	120 VOLT DED. CIRCUIT 100 GALLON, SEALED COMBUSTION, DIRECT VENT

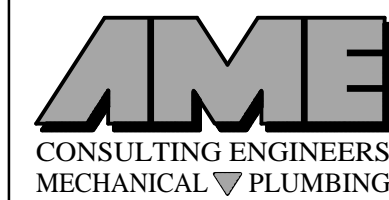
PROVIDE WITH "AMTROL" MODEL ST-12 EXPANSION TANK FOR EACH WATER HEATER.

CIRCULATING PUMP SCHEDULE						
TAG 6P	MANUFACT.	MODEL	HP	ELECTRICAL CHARACTERISTICS		REMARKS
				VOLTS	PHASE	
1	B & G	LR-15B	1/12	120	1	ALL BRONZE, IN-LINE, CONTROLLED WITH AQUASTAT IN HOT RETURN PIPING.

NOTE: PUMP SHALL BE DIRECTLY CONNECTED TO POWER, SEE ELECTRICAL DRAWINGS.



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